IDAHO ENGINEERING LABORATORY PROPOSED PLANS

PUBLIC MEETING and COMMENT SESSION

May 18, 1995

Moscow, Idaho

PRESENTATION NO. 1

Stationary Low-Power Reactor-1 and Boiling Water Reactor Experiment-I Burial Site Investigations and Track 1's

SPEAKERS:

Alan Jines, DOE Idaho
Jean Holdren, Lockheed Martin Idaho

PRESENTATION NO. 2

Central Facilities Area Landfills I, II and III and Track 1's

SPEAKERS:

Alan Dudziak, DOE Idaho
Steve McCormick, Lockheed Martin Idaho

AGENCY REPRESENTATIVES:

Jean Underwood, Shawn Rosenberger - Idaho Division of Environmental Quality

Howard Orlean - Environmental Protection Agency Region 10 Office, Seattle, Washington

MODERATOR

Reuel Smith

I N D E X

MOSCOW, IDAHO, MAY 18, 1995, 7:10 P.M.

MR. SMITH: We'd like to welcome you out to this meeting tonight. We hope that you find this a pleasurable experience. It's different, isn't it, to meet in a mall? Do you know the reason why we're here tonight is in response to the comments from citizens who have attended meetings. They like this location. They like the accessability to the general public and the openness that it suggests.

On behalf of the Department of Energy, Environmental Protection Agency, and the State of Idaho, we welcome you, and we appreciate you coming ahead of time and participating in that availability session. We hope that it's helpful. That half hour before the meeting is also done in response to a citizens' request, so we want to give citizens credit for the ideas that they've had to help make this a better process.

With respect to that, I'd like to just make you aware of the fact that the INEL Community Relations Plan, which really guides the activities associated with public involvement in the cleanup process, these have been released. We have copies on a back table back here. Many of the ideas in here are the result of a tremendous amount of input from citizens

from the Moscow area. And, Ken, you were involved in this three years ago.

AUDIENCE MEMBER: Yeah, I remember that meeting.

MR. SMITH: And we want to give you credit for helping make this a successful document and hope that you'll grab a copy. We've brought along with us materials out there on the table in the hallway to acquaint citizens with the amount of work that's been done over the past year, and we -- this is an opportunity to find out what's happened to those projects that you've already commented on and find out what their -- what the decision was and what stage of action that it now is in.

Tonight we'll be talking about two different topics. We have two presentations. The first one will be about the Stationary Low-Power Reactor and the Boiling Water Experiment Reactor investigations. The second presentation will be on the Central Facilities Area Landfills. Now, the format that we'd like to use tonight is that we will have a presentation. And while we're giving the presentation, if you have a question that you'd like to ask, if something isn't very clear, feel free to ask that and we'll take that during the presentation.

We'll have time for a Question and Answer Period, and then we will actually ask you if you have comments you'd like to give for the record. There are three or four opportunities and different ways of giving comments tonight. One would be to the court reporter during that portion of the meeting. We also have a hand-held recorder if you'd like to leave a recorded message. On the back of the proposed cleanup plans, there is a business reply comment form, and that can be sent in at any time during the comment period if you'd like. It doesn't have to be turned in tonight unless you'd like to.

The fourth way to comment is as listed in the proposed plan. The INEL has now a 1-800 number and that's the result of that -- one of those meetings that we held, Ken, that you remember. You can call that number and go to a recorder and leave a message, an actual comment on these projects, and it will be included in the transcripts of the activities during this comment period. So we hope that that makes it convenient.

So if you're aware of your associates or friends that would like to comment, you might remind them of those mechanisms to do that. I'd like to introduce the presenters tonight for the first project

from the Department of Energy, Mr. Alan Jines, here, and Jean Holdren from Lockheed Martin Idaho. And representing the State of Idaho we have Jean Underwood with us.

And at this time I'd just like to ask generally if you'd like to make a statement about these projects.

MS. UNDERWOOD: Sure. Good evening. I'm the State's Waste area group manager for this project. Tonight's information is going to be presented regarding 28 burial sites as well as several what we call Track 1 sites, and those will be defined for you later. The State believes that Preferred Remedial Alternative as identified in the proposed plan for those two reactors sites is the best approach, as is the proposed No Further Action for the ten Track 1 sites.

I'd like to mention too that EPA representives have been present at both the Idaho Falls and Moscow -- or excuse me -- the Idaho Falls and Boise session, and was unable to attend this evening, and basically, you know, they've made a statement that's very similar to mine in terms of indicating their concurrence with the Preferred Alternative identified for the site. And again, thank you for coming.

MR. SMITH: Thank you, Jean. In this

first project you'll hear language about two different types of investigations, and we'll be discussing what we call a Track 1 investigation and Remedial Investigation Feasibility Studies. When the three agencies were negotiating the agreement to clean up the INEL, they established a pattern of investigations to streamline the process to take advantage of existing information and hopefully eliminate a lot of unnecessary work to get to the heart of the problems. And they established a hierarchy of investigations.

First off they started with preliminary investigation. This -- the Track 1's consisted of doing research reviews, written documents that already existed on these projects. And if they could determine from that that no contamination had been released, they would declare it a No Action site. Or if they felt like there was -- too many things were unknown about that project, they would say we better go out and do some more intensive investigation, send some people out in the field to take samples, for instance, of water or soil, and come up with some concrete information.

Based on the sampling information, then, they could also say there was nothing there; therefore we'd call that a No Action site. Or they could say we better take another two years and study this problem,

and do some treatability studies to figure out how to solve the contamination release. After the agencies do those investigations, they come to a point in time where a decision has to be made, and that's one of the reasons why we're here tonight.

The agencies will present the findings of their investigation. The public is involved in this process, comments are taken for the record, and the decision that is made is made by evaluating public comment, evaluating the findings of the investigations, and then determining whether an action needs to be taken or not. So with that quick little overview about these two types of investigation, I'd like to turn the time to Alan Jines to walk us through this presentation.

PRESENTATION BY DOE IDAHO

MR. JINES: Thank you. Tonight I'll be discussing the burial grounds for two reactors. The first is the Stationary Low-Power Reactor, which we use the acronym SL-1 for that reactor. The second is the Borax 1 reactor burial ground. I'm going to show you where they're at on the INEL. The SL-1 reactor burial ground is located here. And this is Highway 20. And the Borax-1 reactor burial ground is located here.

The Stationary Low-Power Reactor was a

small nuclear reactor that was constructed in the 1950s. In 1961 as a result of an accident during a routine maintenance operation, the reactor went critical. This resulted in a steam explosion, the death of the three operators on duty, and it ruptured the containment vessel. After the fuel was removed from the reactor core, the building was demolished and it was buried right here, shown in this photograph. We've got a schematic. This is the original location of the SL-1 burial ground, and that would be right here in this photograph.

And if you go down this road -- it's about 1,800 feet -- you travel along here to the actual burial ground which is shown in the inset. Unfortunately, we didn't have one photograph to show the whole thing. This is Southern Butte, so you're actually looking south, if that helps you get oriented on the site. During the demolition operation of the SL-1 reactor building, the soils around the reactor were contaminated with radioactive materials, so the soils were also scraped up. So we had soils and gravels scraped up and they were also placed in the SL-1 burial ground.

While they were being placed in the burial ground we had radionuclides, low levels of radionuclides, that spread into the area surrounding the

burial ground. So today we have this four-acre burial ground made up of three excavations, each 4- to 500 feet long. And then we have an area that's 37 acres where we have low levels of contamination on the surface soil.

The Borax-1 was another experimental reactor. It was constructed in 1953. In 1954 at the end of its design life it was intentionally destroyed by allowing the nuclear reaction to proceed until the -- another steam explosion ruptured the vessel. In this case it contaminated the reactor building itself, the foundation where the core of the reactor was, and it contaminated the soils around the reactor.

I have a schematic of this site as well. This is the actual foundation, and we have a fenced area which we refer to as the burial site. It's only about a fifth of an acre in size. When we went to clean up this mess after the explosion, the reactor building was pressed into the foundation and clean soils were placed over the foundation, and this is the way the site looks today. There's actually an elevation change of four to five feet. There's actually a mound there, but you can't see it very well in this photograph.

After removing the debris that was spread as a result of the explosion and the hot particles that could be found, a six-inch gravel layer was laid over

this area to decrease the levels of radiation coming up from the ground which had become contaminated. Since both of these sites involved radiologically contaminated debris, we decided that we could save time and money by combining them and investigating them together in considering the different remedial alternatives only once.

The remedial investigation consisted of determining the contaminants that were in the burial ground and the risk that they might pose to human health and the environment. After reviewing the available record, the three agencies decided that no sampling would be performed. This was because we had an accurate record of the loads in the cores of each of the reactors, and because it's difficult to obtain useful sampling data from a burial ground.

Using the known load in each of the reactor cores, the operating histories and computer models, we estimated the contaminants contained in each of the burial grounds. The primary difference between the two is that at the Borax-1 we have quite a bit of uranium-235, and at the SL-1 we have a much smaller quantity, and this is also significant because uranium-235 is a hazardous radionuclide that decays away very slowly, lasts a long time, whereas most of the

other radionuclides decay away much sooner.

Jean Holdren is the primary author of the remedial investigation report and also the risk assessment report, and she's here to discuss her findings.

PRESENTATION BY LOCKHEED MARTIN IDAHO

MS. HOLDREN: The risk assessment examines the danger a person encounters by living or working on a site. We performed what's known as a baseline risk assessment, meaning that we examined the risk that may exist in the event that no remediation were performed. An exposure scenario is a description of how a person working or living on a site can come in contact with a contaminant. Ten exposure scenarios were examined for each of these two burial grounds representing three time frames: today, 30 years in the future, and a hundred years in the future. For today's discussion we chose one scenario from each of those time frames to present to you today: a current worker, a resident living on the site 30 years from now, and a farmer working the site a hundred years from now.

How a person may actually receive exposure to a contaminant is called an exposure pathway. Of the exposure pathways possible, direct exposure to

ionizing radiation and inhalation and ingestion of contaminated materials were judged appropriate for the conditions at these burial grounds. These exposure pathways were asessed for each of the scenarios.

The current occupational scenario represents a worker out on the site for a maximum two weeks a year performing monitoring, fence maintenance and observations. The exposure pathways for this scenario are direct exposure to ionizing radiation, soil ingestion, and inhalation of dust. The scenario 30 years in the future represents a resident building a home on the site and living there for 30 years. Residential groundwater ingestion was added to the list of exposure pathways. Note that for both of these exposure scenarios, we incorporated the assumption that the person is directly exposed to the waste.

In reality, at least two feet of soil cover exists over both of these burial grounds. A worker on either site today is shielded from exposure of radiation by this soil cover and is protected by very strict safety precautions. However, for risk assessment purposes we assumed that there was no shielding, that there was no soil cover. The scenario 100 years in the future models a subsistence farmer living on the site for 30 years raising crops and livestock and consuming

what is produced. Ingestion of plants, meat, and milk were added to the exposure pathways. Exposure to ionizing radiation and soil ingestion were the primary and secondary exposure pathways. This was determined by estimating the risks and then comparing them to the acceptable risk range.

The Environmental Protection Agency established risk guidelines to help us make remediation decisions and to define the excess cancer risk associated with the site. Each of us is already at risk for getting cancer. In fact, about one in four of us will eventually suffer from some form of cancer, but what we call excess cancer risks are those over and above the standard risk of getting cancer.

The EPA defined the acceptable risk range at between one in 10,000 and one in one million. We use a range because estimations of risk is not exact. And when we say that one person in one million might get cancer, what we really mean is that there's a probability that one person out of a group of one million people could get cancer as a result of exposure to radionuclides at one of these burial grounds. This one person in a million would be in addition to the one in four already expected to get cancer for some other reason.

Excess risks were estimated for all the scenarios and compared to this risk range. The baseline risk assessment focused on cancer risks because all of the contaminants at both burial grounds are radionuclides. For radionuclides the risk of getting cancer far outweighs the chemical hazard. Chemical toxicity was considered but not found to be a significant component of the total risk at either site. Of all the exposure pathways assessed, the exposures to ionizing radiation has the highest risk in each of the ten scenarios that we examined. Soil ingestion was identified as a secondary exposure pathway for some scenarios but at much lower risk levels.

There were no other exposure pathways in any scenario with excess cancer risk greater than EPA's acceptable range. In particular, risk due to groundwater ingestion is not a driver at either site because the aquifer will not be significantly impacted by contaminants from either burial ground. In fact, modeled estimates indicate a maximum cancer risk at SL-1 right at the bottom of EPA's acceptable risk range here at one in a million; and at Borax-1 risk via groundwater ingestion is at three in a million, slightly above bottom of the range. Cesium-137 and strontium-90 were identified as the current primary risk drivers, with uranium-235 becoming a component of the risk that grows

in importance as the cesium and strontium decay away.

As Alan already mentioned, the uranium-235 is particulary significant for SL-1. Estimates of excess cancer risks are unacceptably high for all exposure scenarios. For the resident living on the site 30 years in the future, if no remediation is performed at SL-1, then the total risk of cancer is about five in ten. This means that one out of every two people living on the site could get cancer as a result of the exposure to contaminants at SL-1.

The risks are somewhat less but still unacceptably high for the other scenarios. Similarly, if Borax-1 is not remediated, then about three of every 100 people could suffer from radiation-induced cancer. Total excess risk for the other scenarios are less but still unacceptably high. However, these risks are changing with time. Cesium-137 is the primary risk driver, and cesium-137 has a very short half-life -- the time it takes for half of the radionuclides to decay away -- of only about 30 years.

Because of this short half-life, the risk from cesium-137 will decrease appreciably over the course of the next few hundred years. At SL-1, excess risk due to cesium-137 will fall into the EPA's acceptable risk range in about 400 years and will

continue to decrease thereafter. Total excess risk will level off just above the bottom of the acceptable risk range, at three in a million, in about 650 years, where it will then remain due to the presence of uranium-235.

At Borax-1, excess risk due to cesium-137 will approach EPA's acceptable risk range in about 320 years. Prior to that time, however, the risk will become dominated by the presence of uranium-235, so the total excess risks will level off just above the EPA's acceptable range at two in 10,000. And there it will remain.

As these figures demonstrate, remediation must be effective for a minimum of 400 years at SL-1 and 320 years at Borax-1 in order to control excess cancer risk from cesium-137. Alan will now come back up and discuss with you the remedial alternatives that were considered to address these risks.

MR. JINES: A feasibility study is what we refer to -- is a study that we use to explore the range of alternatives that we might take to remediate a site, the fixes there are. That's what's normally performed. In this case we performed what we refer to as a Focus Feasibility Study. What we did is we only looked at alternatives which had been selected as the remediation alternative for other similar sites. So if

it hadn't been used before, we didn't consider it. We just looked at -- if it's worked before, we'll consider it. And if it had never been chosen as the solution before, we didn't consider it. The reason we did this was because it would streamline our investigation, it would reduce costs, and it would allow us to get to this stage in the remediation process sooner.

The four alternatives that we considered were the No Action Alternative, which we're required by law to consider; the Institutional Control Alternative. Institutional Controls would consist of taking steps to prohibit people from actually going out on the burial grounds, so fences, rules -- you can't go out there -- and inhibit the exposure that way.

We considered containment as if by a cap or a barrier and then excavation and removal of the contaminated materials. In order to select between these four alternatives, we compared them to these evaluation criteria, all except for this last one. The public acceptance portion is what we're determining now and that will be based on your comments and any other comments received during the comment period. When we performed this comparison, the Institutional Control Alternative dropped out because it didn't meet the test for long-term effectiveness. Whatever we do has to be

in place for 320 years for the Borax or a minimum of 400 years for the SL-1. That leaves three alternatives to explore further, the first of which is the No Action Alternative.

Under this alternative the waste would remain in place. We would drill monitoring wells so that we can monitor the aquifer for radionuclides. The cost that we figured is $1.1 million for the SL-1 and $1.4 million for the Borax-1. And that's based on the cost to perform monitoring for 30 years, and the cost to drill the wells. The second alternative, which is the Preferred Alternative, is containment by capping. And this cap would consist of natural materials. It would have several layers. There would be sand layers, gravel layers, and cobble layers. And the primary purpose of the cap is to prevent people from being exposed to the ionizing radiation. As Jean discussed, that's our primary driver -- direct exposure to the contamination.

Now, the cap would be effective not only because of its thickness but because of the components it would inhibit intrusion by ants, mice, mammals and coyotes that might burrow into the waste and bring it to the surface and thus bring about exposure again. It will inhibit wind and water erosion, and it will inhibit the ability of plants to send their roots down into the

contaminated waste and draw some of the radionuclides up into their foliage.

The waste would remain in place, of course. We would perform the same long-term monitoring. The cost for the SL-1 would be $3.8 to $8.8 million, and for the Borax it would be $2.3 to $4.7 million. Yes?

AUDIENCE MEMBER: Why the difference between those two?

MR. JINES: The primary reason that we have a difference -- oh, between the two sites?

AUDIENCE MEMBER: Yes

MR. JINES: I'm sorry. Because the SL-1 is a four-acre site, and the Borax-1 is one-fifth of an acre. That's the reason for the difference. And we have a cost range because of these contaminated soils that we discussed before for both of those sites. The caps would be designed to just fit over the burial ground. Now, if when we begin the actual design of the cap and we go out and we do sampling, we find that these contaminated soils are so hot that they present a risk, that we'll consolodate those materials, scrape them up, and we'll put them underneath the cap and that will increase the size of the cap.

If all the materials turn out to be so hot we have to scrape them up, we'll end up at the upper

end of the cost range. If none of the materials have to be scraped up, we'll end up at the lower end of the cost range. It's the same situation for the SL-1.

The third alternative that we considered is excavation and removal. For this alternative we would actually construct a building over each of the sites so that when we were doing the excavation, no wind-blown contamination could get out into the atmosphere. We would use conventional excavation to go in, excavate the sites, haul the debris to the Radioactive Waste Management Complex, which is a low level waste burial ground on the INEL. We would backfill each of the sites with clean soil, we would reseed, and we'd have a clean closure.

The estimated cost of the SL-1 is $68.9 to $201 million, and for the Borax-1 it's $8.4 to $20.5 million. And that cost range is caused by the same contaminated soils around your site. Only in this case you scrape up the soil and haul them to the Radioactive Waste Management Complex for reburial. And again, if we have to do them all, we're at the upper end of the cost range.

The advantages of the Preferred Alternative -- the primary reason we like it is it protects -- it reduces the risks to protect human health

and the environment. The second big driver is that it protects workers and the public during the remedial action. Now, keep in mind that we currently have a two-foot soil layer over each of the burial sites in place there. That actually reduces the radiation levels to background for the SL-1 and very near background for Borax-1.

If we were to excavate these sites, we would have exposure to the workers, direct exposure to the ionizing radiation. And we see that as one of the big hitters to differentiate between the Preferred Alternative and the Excavation and Removal Alternative. The Preferred Alternative would inhibit the migration of the contaminants and it will provide a long-term barrier.

Now, for the Borax, there's one -- there's a negative I want to explain. When you design a cap, you have to assume a design life. Say, okay, from the Borax we're going to design that for 320 years. Well, for design purposes you assume that after 320 years, the cap fails and essentially goes away and for the Borax we get a lot of decay occurring during that 320 years, but we still end up with a risk of two in 10,000 for anybody that chose to live on top of the site. So 320 years from now that risk of two in 10,000

could return. Did you have a question?

MR. SMITH: Would you mention why -- what it is that's causing that risk at Borax?

MR. JINES: It's the uranium-235. It's that long-lived radionuclide. Yet risk is low compared to the others, but it's persistent. The Track 1 process is a process that the Department of Energy uses to assess sites to determine if we're going to take a removal action, or do more investigation, or take No Further Action. In this proposed plan that you have, we have included ten Track 1s for which the agencies have all recommended that No Further Action will be taken.

Seven of these sites are located in the Power Burst Site, which is located just above the SL-1 reactor. And three of these sites are located in the Auxillary Reactor Area, which is the same as the SL-1 reactor area. For each of these sites we have either found contamination or very low levels of contamination. And the contamination we found has been so low that it doesn't pose an unacceptable risk to human health and the environment.

It's for these reasons that the agencies have recommended that No Further Action be taken on any of these ten Track 1 sites.

MR. SMITH: Okay. That represents the

body of the presentation. Now we'd like to just have some dialogue with you to clarify anything that may remain unanswered, you know, in your mind, raise any questions you have with any of these projects. We can talk about the Track 1s or the three alternatives, you know -- anything that you'd like to go into in detail, the idea being that in a few minutes we'll have a comment session and ask those that would like to give a comment for the record to give their comments. So if you want to explore some idea now that you might reflect in your comment, we'd be glad to talk to you about those things. Ken?

Q/A AND PUBLIC COMMENT SESSION

AUDIENCE MEMBER: I have a question on this capping process. I think you mentioned that you didn't consider any processes that hadn't already been tested.

MR. JINES: We didn't consider any processes that hadn't been selected before for similar sites.

AUDIENCE MEMBER: Has the capping process, then, been selected before?

MR. JINES: Yes, it has. It's been selected on several other sites.

AUDIENCE MEMBER: But it hasn't been tested 320 years, though.

MR. JINES: That's correct. No question about it.

AUDIENCE MEMBER: Just what is the cap that's going to last for 320 years?

MR. JINES: The cap will be constructed of natural materials, nothing man-made. So it will have sand layers; it will have a gravel layer, and it will have on top -- that will be basalt, large chunks of basalt so that it won't be blown away and it won't be washed away. And the basalt will inhibit what we refer to as the inadvertant intruder, which is just a person that's out looking for a place to play, basically. They don't see the signs; they don't recognize they're on a burial site and they want to dig a hole. So the basalt will be there to deter that.

So the cap will be on the order of four to eight feet, and because it will be constructed out of natural materials, that's the cost.

AUDIENCE MEMBER: You mentioned controlling rodent and insect activity and that sort of thing. How are you going to see them well enough to prevent rodents? They can get down between the rocks and go through sand. Will you have it fortified or

something like that?

MR. JINES: You're right. No. We're doing a lot of research at the INEL right now -- it's very interesting, as a matter of fact -- where we've taken different natural materials like sands and gravels and we're determining the ability of the mice -- and in this case it's actually a deer mouse. Deer mice at the INEL burrow up to 10 feet, and so we've taken layers of materials and we mark them with dyes, just spray a dye on the materials, and we watch the mouse and we watch what he brings up to the surface. And when the colors change, we know how deep he's gotten, and the mice can't penetrate gravel layers, or rather they choose not to. They can't penetrate gravel layers. So that's the purpose of the gravel layer.

And the ants won't penetrate a sand layer, and that's the purpose of the sand layer. And the plants typically won't penetrate a gravel layer unless there's a driver for them to do it, so it really inhibits the plant intrusion. So that's the purpose of the different layers. And then the larger basalt is there because we do have coyotes, and they will burrow into the sides of hills and they're intended to be large enough that a coyote wouldn't be able to burrow.

The other step that we take is we do

perform the periodic long-term monitoring and we assume a 30-year period for that. But the argument can be made that after 30 years we'll stop looking at the site and it's intended to be stable enough to withstand that use. Does that answer your question?

AUDIENCE MEMBER: Yeah.

MR. SMITH: Any other thoughts or concerns you'd like to address before we look at some comments?

AUDIENCE MEMBER: I have one other, yes. On this --

MR. SMITH: Excuse me. One thing I was wondering if we ought to bring our chairs around here so it's a little closer so maybe it won't be so distracting back here. Maybe if you'll just form a little circle here. Okay. Ken, I'm sorry for that.

AUDIENCE MEMBER: On the SL-1, is that the one that was originally termed a portable reactor?

MR. JINES: Yeah. It was originally -- it was part of a series of reactors that the Army constructed for portable uses. The intent -- it was the Stationary Low-Power Reactor, was the prototype. The idea was to make a reactor that could be quickly shut down, transported to a remote Arctic location and used to provide heat and electric.

AUDIENCE MEMBER: Yeah. And it could be

moved on a railroad car, but that's as close to being portable as it got; is that the one?

MR. JINES: One. Well, the Stationary Low-Power 1, of course, blew up, but then they built another reactor called the ML-1, the Mobile Low-Power reactor --

AUDIENCE MEMBER: Oh, okay.

MR. JINES: -- and I think maybe one more, but I'm not sure of that.

AUDIENCE MEMBER: Well, my question is based on the fact that I visited this portable reactor back in the '50s sometime.

MR. JINES: Oh, really.

AUDIENCE MEMBER: And I had a chance to go on site and a good friend of mine was working at that location. So we investigated that, and I wanted to find out how close I came to being blown up on the -- guess I wasn't close at all.

MR. SMITH: If you were in the '50s, yeah.

AUDIENCE MEMBER: Sometime in the '50s.

MR. SMITH: This accident occurred in 1961.

AUDIENCE MEMBER: '61. Okay.

MR. JINES: January 3rd. That was the project, though.

AUDIENCE MEMBER: That was the project.

Okay. But was that at the SL-1 site? You mentioned it might have been at a different location.

MR. JINES: The ML-1?

AUDIENCE MEMBER: Yeah.

MR. JINES: I don't know where it was.

AUDIENCE MEMBER: Maybe they moved it around, actually.

MR. JINES: I would hope. Right? It's mobile.

AUDIENCE MEMBER: I think it was on a concrete base when I visited it, but they said that it was capable of being moved with a railroad car. Okay. That was just an aside.

MR. SMITH: That's fine. One of the things I'd like to do, let me put -- I'll put Alternative 3 back up here. And just for purposes of conversation, have you -- you realize that tonight we're looking for your ideas and suggestions. You may have comments on any one of these three alternatives or you may feel that a combination of elements between these would be appropriate or you may have entirely different alternatives that you think that the agencies should consider. And so that's kind of the purpose of, you know, this additional portion of the meeting, to just open it up all the way and say what are your thoughts

about these alternatives for remediating this site.

AUDIENCE MEMBER: One thing that occurred to me on this Alternative 3 is that if you move that material, you're eventually going to have to cap it or something anyway, aren't you?

MR. JINES: Exactly.

AUDIENCE MEMBER: And like you say, you expose the workers to all the hazards involved in that process. And if you can find a safe way to cap it, you might as well entomb it right in place.

MR. JINES: That's our feeling, yeah. Absolutely. And that's the driver. If you excavate it, you're basically just digging it up, taking it somewhere else, and burying it again.

AUDIENCE MEMBER: Yeah. I still have some concerns, though, about animals and so forth getting at the material down there because you can't ever -- you can't always predict what these animals are going to do.

MR. JINES: No, I understand. It's a good point. The concept of designing something to last 320 years requires a stretch of the imagination anyway, except perhaps when you consider that when we're done, this is going to be a four-acre pile of rocks, basically very stable rocks, in an area where there's not a

mechanism for them to be washed away.

But as to the animals burrowing, I think it's fair to say that what we will do will inhibit the ability of those animals to penetrate the cap. But to say that it will prevent it absolutely is something that I couldn't.

AUDIENCE MEMBER: Just a point of attracting -- building an attractive nuisance for a future generation in the way you put it together there.

MR. JINES: We want to -- we want to build it so that it will be an unattractive site to people. And, of course, incorporate these ideas --

AUDIENCE MEMBER: Unattractive to animals too.

MR. JINES: Make it unattractive to animals, yeah. And actually, if this is the selected alternative, we'll be putting markers on the sites that are designed to last hundreds of years, you know, as to indicate to a person that there's something special about this site.

MR. SMITH: Well, if there's no further questions, we'd like to just go ahead and invite you to give comments for the record. But let me just get an indication from you. Would you like to continue some questions and answers and more dialogue or --

AUDIENCE MEMBER: No, not on my part anyway.

MR. SMITH: Okay. Would any of you three individuals like to make a comment tonight for the record expressing an opinion of which alternative you prefer or what you would like to see done with this site?

AUDIENCE MEMBER: Personally, I'd rather study it a little bit more and then maybe respond in writing if I do see a need.

MR. SMITH: Okay. Then with that, those expressions, let me just indicate to you that the comment period on this project started on May 3rd, and so it doesn't end really until June 3rd. And if between now and the end of the comment period something comes to mind -- if you'd like to speak to one of the project managers or to Jean Underwood at the State about this project -- both the State and the INEL have 1-800 numbers, and I'd suggest you call those numbers if you'd like.

AUDIENCE MEMBER: Are those numbers listed in here?

MR. SMITH: Yes. We should have it in a side bar. It's on the very cover, about briefings can be arranged or you can leave comments by calling the same number. On the bottom of the side bar.

AUDIENCE MEMBER: Okay. Sure. I see it. Yeah.

MR. SMITH: If you'll call that number, someone will call you back. But you can also leave a comment on that as a recorded message.

AUDIENCE MEMBER: I've used that number before and I think it's very convenient. I like it.

MR. SMITH: Okay. Excellent. Any reminders that we ought to make at this time? For the record, it appears that we have -- that we'll not be receiving any public comment tonight on the SL-1 Borax project.

If during the break or after the next presentation something comes to mind that you'd like to talk to, we'll reopen the record and come back to it, or again I have the recorder that we could record it on the hand-held device. With that, you know, if there are no other questions or comments --

MR. JINES: I have just one reminder. I forgot at the other two meetings. We're not locked into doing the same thing at each site. Okay, just if you take one -- if you think one site is a better candidate for a different action than the other, that's a fair, fair comment.

AUDIENCE MEMBER: Well, do you have

different nuclides at one, a different mix of them? And that makes a difference.

MR. JINES: Exactly. They are different sites, yeah.

MR. SMITH: Let's take a quick break, about a five-minute break, and we'll bring up the next presentation and change our storyboards. And feel free to ask questions of the project managers too during this time.

(A recess was taken.)

MR. SMITH: We're back from the break. Thank you for hanging in there with us. The next presentation that we'd like to go into is the Central Facilities Area Landfills investigation. And here to present that project from the Department of Energy is Alan Dudziak, and with him is Steve McCormick from Lockheed Martin in Idaho. And the State representative for this project is Shawn Rosenberger from the Idaho Falls office of the Division of Environmental Quality in this Department of Health and Welfare for the State of Idaho.

We'd like to invite you to come up front and make a statement if you choose to.

MR. ROSENBERGER: I'm Shawn Rosenberger. I'm with the State of Idaho DEQ, and I'm the State's

Waste Area Group project manager for the Central Facilities Area. And we have been involved in the investigation, reviewed the sampling plans, investigation reports, and helped to write the proposed plan. And we do concur and support the Preferred Alternative.

And I thank you all for coming out tonight and encourage you to provide any comments, ask any questions that you have, and we'll consider those as we write the Record of Decision.

MR. SMITH: Okay. Thank you, Shawn. With that, Alan -- let's turn the time over to Alan Dudziak.

PRESENTATION BY DOE IDAHO

MR. DUDZIAK: Thanks, Reuel. Good evening. I'm Alan Dudziak with the Department of Energy. I'm the project manager for Waste Area Group 4, which is the Central Facilities Area, which includes the landfills. And also tonight we'll also be talking about No Further Action at the Track 1 sites.

Primarily we're here to tell you about the landfills, our investigation of them, and the remedial acts that we propose to take on them. I'll also, like I mentioned, be discussing the Track 1 sites

which are all in underground storage tank sites. And before I get into this I'd like to mention some differences between this project and the SL-1, Borax project. Primarily -- and we do not have any clearly identified unacceptable risks at the landfills and we do not have the long-term radiological concerns. Our action is driven by the uncertainty with the investigation and with what went into the landfills.

Okay. First, the locations of these things. This is Idaho showing where the INEL is, and these are the two projects that you heard about earlier. What I'll be talking about is things at the Central Facilities Area here, and one of the Track 1 sites is actually a ways north, but it's being evaluated as part of the Central Facilities Area. I'd like to start with a little bit of background and history on landfills. This is an aerial view showing the Central Facilities Area here and the three land landfills that we're talking about here tonight.

Landfill I was operated from the 1950s until 1984, although most of the disposals were prior to opening of Landfill II in 1972. Landfill I is about eight acres, and it's located right here. Landfill II was operated from 1972 until 1982. It's about 15 acres, and it's shown right here. It extends beyond the edge

of where the photograph covers.

Landfill III was operated from 1982 until 1984. It's about 12 acres, so it's a total of about 35 acres we're dealing with tonight. And in this area here that you see next to Landfill III is called the Landfill III extension, and it was operated until 1993 so it's not part of this investigation.

Okay. A little bit about what went into the landfills. The landfills do include smaller quantities of things like metals, oil, sludge, paint, paint thinner, other solvents and chemicals. But the vast majority of the waste is ordinary things like trash, sweepings, cafeteria garbage, wood, and scrap lumber, weeds, grass clippings, various construction debris and things like that. And as the wastes were disposed of, they were covered with dirt, and as we approach the ground level there was a final layer of dirt placed over them, which is what we'll be referring to tonight as the existing soil cover, and it's approximately one to four feet thick.

Now, starting about two years ago we conducted a remedial investigation of these sites and here tonight to tell you about it is the technique lead on the landfills projected, Steve McCormick. Steve.

PRESENTATION BY LOCKHEED MARTIN IDAHO

MR. McCORMICK: Hi. I'm just going to use this generalized diagram of what most landfills look like to describe what the investigation is of what we performed. Typically in landfills you have the waste that's compacted, a soil cover. We collected samples from the soil cover -- can you hear me?

AUDIENCE MEMBER: Yes, I can.

MR. McCORMICK: We selected samples from the soil cover, from the air above the covers, and from a network of groundwater monitoring wells in the vicinity of the landfills to look for possible contaminants that may have leached from the waste itself. The results of our investigation overall are summarized here. In all of these contaminants we showed no clear unacceptable risk. That's what our risk assessment showed.

And essentially that is from these pathways here where contaminants could have escaped or migrated out of waste and been -- and a human could have been exposed in those pathways. Now, you notice that we did not -- I didn't say that we sampled the waste itself for risk assessment purposes, and that's simply because there's a tremendous amount of uncertainty with that approach by sampling the waste. And the best way I can

think of to illustrate the uncertainty is just -- well, most of you have been to a landfill. You have all kinds of people there, people dumping grass, wood, televisions, the orange couch from the basement, the containers, and who knows what's in it. And so it all gets unevenly distributed throughout the landfill, and it's not sorted at all. It's not like all the wood is over here, all the metal is here or so forth, so it's very dificult to investigate at any given location or even at several locations and collect samples that are indicative of the rest of the waste.

So that -- that kind of is a summary of the uncertainty involved in this investigation. And because of that uncertainty the agencies felt that it was important at this site to evaluate remedial alternatives. And Alan is going to come back up and talk to you about the actual alternatives we did evaluate. Thank you.

MR. DUDZIAK: Thank you, Steve. Okay. So where do we go from here? Steve has told you a bit about the investigation we did and the results of that investigation and some of the sources of uncertainty which are summarized here, basically that it's hard to get representative samples because of the unsorted nature of the waste.

So even the data that we do have is not necessarily representative of everything that's in there. The general nature of the disposal records, especially in the earlier days, the records were not specific as to, you know, the particular contaminants that may have gone into the landfills. Even the more recent ones aren't going to spell out exact quantities of particular contaminants. It's more along the lines of what types of waste it was.

And then also the exact volumes and types of contaminants, we don't have the perfect information on those. So basically, the baseline risk assessment doesn't show any clearly identified unacceptable risks, but there is a lot of uncertainty about it. And it's impractical to fully characterize them. So given all this uncertainty, we've taken -- you know, there's the possibility that the risk could be higher than we have calculated.

So we have presumed that there could be a higher risk and are taking action accordingly. Now, it's also important to note that the risk assessment did not show any extraordinary risks that might warrant an action more severe than we're proposing. Okay. So in order to minimize any potential risks because of these uncertainties, we've established some remedial action

objectives, which are basically to prevent contact with the waste, protect the aquifer, and comply with all applicable or relevant and appropriate requirements.

That's quite a mouthful, so we use the acronym ARARs. And basically these requirements ARARs, are various laws and regulations which either apply to our sites or which could provide good guidance on how to deal with a site like we have. An applicable ARAR means that it is applicable to this site and we are bound to it by law. "Relevant and appropriate" are the ones that give us, you know, guidelines on how we might approach the remediation.

And one place that we looked for guidance on how to meet these objectives was in EPA's presumptive remedy guide for CERCLA landfills. Now, CERCLA is an acronym also. It stands for the Comprehensive Environmental Response Compensation and Liability Act, or Superfund as most people have heard about it. And in the presumptive remedy guidance, it's basically a generic remediation approach for landfills in this case.

It's proven technologies that have been used on landfills before, and so we can look at, you know, how are we similar to these other sites and learn from the ways they've done things in order to come up with a good approach for our landfills. And we have

found that remedial action at these landfill sites is consistent with the CERCLA presumptive remedy or the Presumptive Remedy Guidance for CERCLA landfills.

Again, to meet these objectives, we looked at some general response actions. One of them is No Action, and the law requires us to evaluate this one. Two others are Institutional Controls and Containment. Now, these we find in the Presumptive Remedy Guidance. Institutional Controls is basically things like building a fence to keep people out of a site or, you know, measures such as that to keep people away from the waste so that, you know, we minimize the risk that way.

Containment is actually taking measures such as additional soil cover or something like that to provide better containment of the waste. Basically containment will limit exposure to the landfill wastes and also minimize potential migration of water into the waste which could lead to migration of contaminants. Now, when we get into looking at specific alternatives we have these evaluation criteria which we use in order to evaluate our proposed alternatives. One of them is to protect human health and the environment -- obviously we want to do that -- another is to comply with ARARs, and these two are called the threshold criterion. In order to get further consideration, any alternative has

to meet those two.

We have some others here which you can see, and if you notice at the bottom, as Alan mentioned earlier, this is what we're here for tonight is to get your views on our proposed alternative. And it's -- public acceptance is one of the evaluation criteria. Now, we considered four specific remedial alternatives. Okay. All of our alternatives have some common elements or assumptions in them. In all cases the wastes remain in place. We would conduct groundwater monitoring for at least 5 years and up to 30 years if needed. There's a 5 year -- every 5-year review period, and that's how we would decide whether a full 30 years would be required.

All of the alternatives assume installation of one additional aquifer monitoring well in addition to the ones we already have. Whether or not that's needed will be determined in the development of the monitoring plan. We're also assuming in all cases that DOE or its successor would control the site for the first 30 years, and all of these costs you'll see are current value of money to be spent over a period of 30 years. This isn't all in one year or a yearly cost. This is the total current value of the money over the full 30 years.

Our first alternative is the No Action Alternative; again, that's the one the law requires us to evaluate. And for this particular case we would assume no access restriction beyond the iniitial 30-year period where DOE has assumed control of the site. And the cost of this one is about a million dollars. And this is for the additional well, the monitoring for 30 years, and management of the project. Okay.

Our second alternative is Institutional Controls with monitoring. In this case the Institutional Controls would primarily be construction of fences and access restrictions. And in this case the access would be restricted beyond that initial 30-year period as well as during the initial years. And the cost of this alternative is about $1.9 million, of which about a half a million is for the initial construction, et cetera, and $1.4 million for the ongoing monitoring management

Alternative 3 is our Preferred Alternative. It's called uniform containment with a native soil cover. Basically what this would be is using the existing soil covers and additional soil as necessary. We would create a uniform containment over the wastes and ensure at least two feet of soil over all the wastes. We would do leveling and grading in order to control the run-on and runoff of water, and we would

have a specified permeability to limit infiltration of water. It would also include deed restrictions, which is basically a warning to potential future users of the land of what's here and could also restrict land use in order to provide protection for the future users.

The cost of this alternative is about $3.5 million, of which two million is for the initial construction, et cetera, and $1.5 million for the ongoing monitoring and maintenance.

Alternative 4 is a containment with a single barrier cover. Now, this is similar to Alternative 3 except the main difference is that it adds an impermeable layer to the cover. This would be either clay or a geomembrane layer, the purpose of which is to further reduce infiltration of water which could potentially drive contaminants. Basically, it accomplishes the same things as Alternative 3 plus further assurance of reduced infiltration. However, it had have a higher short-term risk because of the additional transportation and construction activities. This alternative will include the deed restrictions, and the cost is about $15 million, of which $12 million is for the initial construction, et cetera, and $3 million for the ongoing monitoring and maintenance.

As I mentioned, Alternative 3 is our

Preferred Alternative, and in the proposed plan on page 14, there's a section called Summary of the Preferred Alternative which concisely summarizes, you know, basically our reasons for preferring this alternative. Some of the advantages of it -- it addresses the uncertainties with the contents, uses a proven technology of the presumptive remedy. It limits potential migration of contaminants by limiting infiltration of water, protects human health and the environment, and it implements a monitoring plan in order to check that it's working, basically.

And we do feel that it is -- provides the best balance among the evaluation of criteria given the regulatory framework in which we work. Alternative 2 is a -- I guess I didn't mention yet. Alternative 2 does not meet ARARs without an ARAR waiver, so it basically fails as one of the threshold criteria and can't be considered further.

Alternative 4 introduces a higher short-term risk and is much more expensive and doesn't provide much better protection. So basically Alternative 3, we feel, is the best alternative. Okay. As I mentioned at the beginning, we also have some Track 1 No Further Action sites to talk about tonight. And I'd like to go into a little bit about the Track 1

process, an overview of the sites, and the conclusion of our investigation, which is basically the No Further Action is appropriate at any of them.

AUDIENCE MEMBER: I've got a question before you get too far away from it.

MR. DUDZIAK: This will just be a few minutes, and then we'll have questions. Is that all right? Thanks. Basically Alan Jines told you about the Track 1 process earlier, so I won't go into that in any further detail. A quick overview of the sites in -- at the Central Facilities Area we're talking about all underground storage tank sites. There are 19 sites with one or two tanks each. Sixteen of them have removal and sampling records. Two of them are believed to be removed based on other information, such as interviews with the operator that removed it or knowing where it was, and a field investigation that couldn't locate it, so we believe it was removed already. You have -- one of them is still in use.

As I mentioned earlier, these were all at The central Facilities Area except for one, which is about five miles north, and this is the one that's still in use. It's a Fire Department Training Area, and it's a gasoline tank that they use and it's still used. They basically use it as a source for fuel, to put some

gasoline into a pit, set it on fire and practice putting it out.

Now, we evaluated it based on potential past releases, and based on that we feel No Further Action is appropriate. It's because it's still in use, it's still regulated and will have to be dealt with when it's taken out of service. Okay. So in summary, we've evaluated all these. We've evaluated them based on preliminary investigations, historical records and/or field sampling, and none of them show unacceptable risk to human health or the environment.

And further details on these are available in a proposed plan or in the administrative record. And with that, I'll turn it back to Reuel.

Q/A AND PUBLIC COMMENT SESSION

MR. SMITH: Okay. Let's take that question here, if you like.

AUDIENCE MEMBER: Well, you indicated between Alternative 3 and 4 that perhaps 4 had a little extra hazard because of the people working there. Is that just because they're there longer or what is it?

MR. DUDZIAK: No. Alternative 4 is a more elaborate cover. There's more soil required. And primarily it's the -- bringing the clay in for the clay

layer that has to be trucked in. And there's a much higher short-term risk because of the transportation of that material. And there's also -- because it's a more elaborate cover, there's more construction activity, so there's more opportunity for an injury or an accident.

AUDIENCE MEMBER: This isn't risk due to nuclear --

MR. DUDZIAK: No, it's not from contaminants. It's just because of transportation and construction activities, and also because of that barrier there's a higher potential for methane buildup, and so we have to do more -- that's one reason the monitoring cost more, is that we have to take measures to ensure that methane buildup isn't a problem.

AUDIENCE MEMBER: Okay.

MR. DUDZIAK: Any other questions?

MR. SMITH: We've got all eyes on Ken tonight. We're glad that you came out. I know we're picking on you. We want to get a lot of your advice and experience. Just for the record, Ken told me he's going to be 80 years old -- is it this year?

AUDIENCE MEMBER: Next year.

MR. SMITH: He's been involved in a lot of things -- on the State Water Resource Board for ten years. He came out to a lot of our meetings that we

held initially from 1990 to date, so we value a lot of the things that you say and, you know, so we're glad that you came tonight.

AUDIENCE MEMBER: Thank you.

MR. SMITH: We'd like to just open this up. Any other general questions about landfills or these Track 1s that you'd like to have them talk to?

AUDIENCE MEMBER: Yeah. I was concerned about the part getting into the Snake River aquifer there, and you have three different materials with zinc and beryllium, and one other that were all at --

MR. McCORMICK: There's -- we collected -- there's several monitoring wells. You know, the aquifer generally flows in this direction.

AUDIENCE MEMBER: Uh-huh

MR. McCORMICK: And there's several monitoring wells. I think that's one of them actually. And there's one one over here and there's three or four of them here that are downgradient or downstream, you know, downstream of the aquifer.

AUDIENCE MEMBER: Yeah.

MR. McCORMICK: And then there's some up here, and for this investigation we collected samples from ten of them over a period of six months, three separate sampling phases to try to get an idea of a

trend in the data because if there are contaminants leaking, you definitely want to be able to see a trend in the data.

And we picked up -- in that data beryllium showed up, but we're really -- you just can't hang your hat on it yet. We're really not sure that there's a trend of beryllium contamination that we can definitely tie to the landfills. And one of the main reasons for that is whenever you collect a sample -- whenever you analyze a water sample, there's a -- what's called a limit or a detection limit how low can you go that the instrument will detect. It's kind of like driving along in your car trying to measure a half a mile per hour. You just can't do that. And it's hovering right around that.

AUDIENCE MEMBER: Lack of precision, then.

MR. McCORMICK: Right. And we've had hits in two of the seven downgradient monitoring wells and nowhere else, and they were still sporadic.

AUDIENCE MEMBER: Well, let me ask this question, then. Why is Alternative 3 any better in terms of the contaminants into the aquifer than the other alternatives?

MR. McCORMICK: Well, in terms of -- well, to get contaminants into the aquifer under this

kind of situation, this is better in and of itself because it reduces the infiltration greater, better.

AUDIENCE MEMBER: But that's not the Preferred Alternative, the 4.

MR. McCORMICK: Right.

AUDIENCE MEMBER: But it would be better than 3, then.

MR. McCORMICK: That's right. Yeah. It does a better job of reducing infiltration through -- well, this is the existing cover, but through the new cover.

AUDIENCE MEMBER: Apparently you've given up on stopping the contaminants as they go down and you're going to limit it by preventing the water from getting in.

MR. McCORMICK: Right. And, you know, in this arid environment out at INEL, you know, mainly what we try to do is -- one of the things that both of these do is create runoff off of the cover so that you don't get standing water on the cover.

AUDIENCE MEMBER: Yeah.

MR. DUDZIAK: One thing -- if you look at these pictures you can kind of see that there's a little bit of unevenness to the ground service, and one potential is that we could get pooling of water if you

had a heavy rain or snow melt or something. And even if things start to run off, if you have low spots, that could cause a pool of water which would tend to cause the water to infiltrate under the waste.

And one of the things we're doing under Alternative 3 or 4 is to provide leveling and grading in order to provide good runoff and also compacting it to limit infiltration. Does that answer your question?

AUDIENCE MEMBER: Yeah. I can still see some problems with it, but what I'm trying to get at is that in choosing your Preferred Alternative you were looking at other factors perhaps a little bit more heavily than you were the infiltration into the aquifer.

MR. DUDZIAK: Well, basically because of the arid environment and such, we don't expect too big a problem with the infiltration anyway.

AUDIENCE MEMBER: Especially in the last eight or ten years.

MR. DUDZIAK: Yeah.

AUDIENCE MEMBER: Now that we're getting more rain and stuff.

MR. DUDZIAK: Yeah. And under Alternative 3 with the grading so that we don't get pooling on the landfills, because of the arid climate and with the low permeability of this cover, we feel

that Alternative 3 will be sufficient in limiting the infiltration and the potential for migration. We didn't identify any migration.

AUDIENCE MEMBER: You didn't what?

MR. DUDZIAK: We did not identify unacceptable migration of contaminants out at the bottom of landfills. Now we only looked at a few locations, you know. Again, that's the uncertainty issue. Yeah. Do you want to add something?

MR. ROSENBERGER: We will be modifying the monitoring program too as part of this remedy, so if there is any contaminant migration, we hope to catch it with that monitoring program.

AUDIENCE MEMBER: I think I heard someone say that you were planning just one additional well?

MR. DUDZIAK: Well, we're looking at the possibility of one additional well in the aquifer. We have a network of wells already, but there may be a need for one more. We don't know. That hasn't been determined yet, but the monitoring could also include things like, you know, measuring the moisture of the soil to find out how much water is infiltrating through the cap, things like that.

Again, the monitoring of the plan, the details of it haven't been worked out, but it would be

designed to like basically see how well the remedies work in it. One thing I did want to add also on the stuff we found in groundwater, that's another purpose of the ongoing monitoring and we're going to lower the detection limits for beryllium, as an example, and try to pin down whether it's really there and, if so, try to figure out where it's coming from.

The beryllium is the one risk that did exceed the acceptable range based on that questionable data, so we do want to pin that down and make sure we understand what the situation is.

MR. SMITH: With that, do you have any other questions you'd like to talk about with these individuals?

AUDIENCE MEMBER: Well, it seems to me that there's some loose ends here that haven't really been tied down, and I know that's always the case. But when you're making a decision to go with a certain alternative here, why, I would like to see a little bit more solid data and so forth to back it up. And there are other -- apparently other places where this has been done and had been successful; is that right?

MR. McCORMICK: In essence, it -- with a typical landfill like this one, that's the essence of what's called a Presumptive Remedy, is that we -- we

present -- you know, we can't go in and sample the waste for many different reasons -- safety and getting a representative sample. And a cover like this is typically put over landfills throughout the country. And you do a limited amount of sampling to show that you're not off base in this kind of a selection, to just show that you're -- that this is applicable to the situation.

MR. DUDZIAK: And basically, you know, we do realize that there's still a lot of uncertainty remaining, and that's why we're taking the action. As we mentioned, we didn't have any clearly identified unacceptable risk. But because of all these loose ends, if you will, you know, we feel that it's appropriate to take this presumptive remedy type of approach.

AUDIENCE MEMBER: But it would seem to me that you do have some radioactive material in there. At least that's what I understood you to say earlier.

MR. DUDZIAK: The potential exists. These landfills were not intended for disposal of radioactive materials. At one sample location we did find some cobalt-60, but we don't know how it got there. Basically, I'm -- as I mentioned earlier, that we didn't have the long-term radiological concerns that SL-1 and Borax did. That's because I kind of want to explain why

our cover is different.

You know, they have a clearly identified risk and they have, you know, an identified radiological problem, and so they are taking measures and they have their soil there to provide shielding and then a cap on top of it to make sure the soil stays there. We don't have that kind of a situation, so we don't need that elaborate cap that they have. That's why I mentioned not having the long-term radioactiivity concern. Basically we don't have a radiological concern per se in those landfills.

MR. SMITH: We had a comment back here?

MR. JINES: Yeah. Steve, let me ask you a question. If this landfill, the same stuff was just out in a city area, you're saying this is what everybody does?

MR. McCORMICK: Typically.

MR. JINES: So if this wasn't a CERCLA site, this was off in town and we went to close it, we would -- this is the action the city would do anyway?

MR. McCORMICK: Typically. It depends on -- you know, it depends on --

MR. JINES: So this is just like a standard technique for closing --

MR. McCORMICK: That's right. It depends

on -- you know, depends on -- you know, in your sampling, you know, in your surface covering sampling, if you find some areas of intense contamination, you might go in there and pull it out or you might cover other areas a little more effectively. But city and county landfills typically do this kind of a remedy.

AUDIENCE MEMBER: I guess my point is that if there's a chance that there's some radioactive contamination in there, that you ought to be using standards that are a little bit above what a normal city might do. And that's why I'm asking is what is it that you're doing that would be above and beyond what a normal city landfill might be treating?

MR. McCORMICK: The only way -- the only thing you can do is go back in there and start digging it out and try to -- any radioactivity -- any radioactivity that would be there would have been the result of an inadvertant, you know, low level disposal. Somebody threw something in the wrong container and it ended up there, and the records don't show it. And the one sample we did on Landfill I, the one sample we did find that cobalt-60 was in the surface cover at a very low concentration. And you get one sample, it's very difficult to pin down the source of that.

MR. DUDZIAK: We don't expect any

significant quantities of radioactivity.

AUDIENCE MEMBER: It would be like a finding a needle in a haystack.

MR. McCORMICK: Yeah, it would be. So typically you have to go back in there and dig through every piece of trash, as it were. So what do you do? You know, that -- you know, the answer is you apply a remedy that's used successfully at other landfills. I mean, that's -- that's kind of our approach.

AUDIENCE MEMBER: Okay.

MR. SMITH: With that, we'd like to go ahead and open it up to a comment session. You know, if you feel so inclined to make a comment now or if this is one of those you'd like to take a little more time and look into before you make your comment . . .

AUDIENCE MEMBER: I'd rather look into it a little.

MR. SMITH: Okay. We'd just like to remind you, then, that the comment period on this project began April 26th and ends May 26th, so that's a week from tomorrow when the comment period ends. But again the 1-800 line is open or the business reply, postage paid form, you know, is on the back of the proposed plan as well. We'd be glad to receive that as well. So barring any other questions or discussion,

then, we'll go ahead and close this public meeting tonight, thanking you for your participation and your involvement, Ken.

It's been great to see you again and to have you out talking with us. And we'll be around for a few more minutes as we're collecting things, and if you want to visit in some more detail, you're welcome to do that.

AUDIENCE MEMBER: Okay. Thank you.

(The hearing concluded at 8:50 p.m.)

REPORTER'S CERTIFICATE

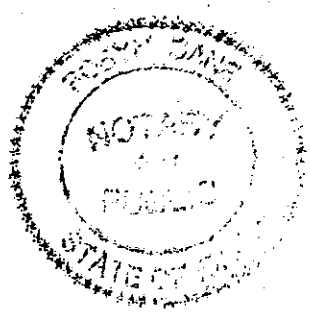
STATE OF IDAHO)
)
COUNTY OF ADA)

I, ROBYN DANE, CSR, a Notary Public in and for the State of Idaho, do hereby certify:

That said hearing was taken down by me in shorthand at the time and place therein named and thereafter reduced to computer type, and that the foregoing transcript contains a full, true and verbatim record of the said hearing.

I further certify that I have no interest in the event of the action.

WITNESS my hand and seal this 30th day of May, 1995.



ROBYN DANE, CSR
Notary Public in and
for the State of Idaho.

My Commission Expires 5/9/97.